## ABSTRACT

Diagnostic methods and devices are provided to aid health-care professionals and non-professionals to determine whether a person's upper respiratory ailments are caused by a viral infection, bacterial infection, fungal infection, and/or allergy. In one embodiment, the method comprises contacting a sample to a surface that is printed with a binder that will bind, react or otherwise associate with a particular biomarker for these causes (e.g., bacterial infection) and diffract light that is reflected off of or that is transmitted through the printed surface. In another embodiment, the method comprises contacting a sample to a surface that is printed with a binder that will bind, react or otherwise associate with IgE antibodies to diffract light that is reflected off of or that is transmitted through the printed surface. In yet another embodiment, the method comprises contacting a sample to a surface that is printed with a binder that will bind, react or otherwise associate with a biomarker indicative of a viral infection (e.g., anti-Influenza A antibodies) and diffract light that is reflected off of or that is transmitted